What is claimed is:

1. A composite-oxide catalyst, which is a catalyst for production of acrylic acid shown by the following general formula (1):

$$Mo_aV_bW_cCu_dA_eB_fC_gO_x \qquad (1)$$

(wherein: Mo is molybdenum; V is vanadium; W is tungsten; Cu is copper; A is at least one element selected from among cobalt, nickel, iron, lead, and bismuth; B is at least one element selected from among antimony, niobium, and tin; C is at least one element selected from among silicon, aluminum, titanium, and zirconium; and O is oxygen; and further, a, b, c, d, e, f, g, and x denote atomic ratios of Mo, V, W, Cu, A, B, C, and O respectively; and, in the case of a = 12, the following inequalities are satisfied: $2 \leqq b \leqq 15$; $0 < c \leqq 10$; $0 < d \leqq 6$; $0 < e \leqq 30$; $0 \leqq f \leqq 6$; and $0 \leqq g \leqq 60$; and x is a numerical value as determined by the oxidation state of each element);

wherein a supply source of a component A for preparing the catalyst is a composite of the component A and at least one element selected from among molybdenum, vanadium, and copper.

2. A process for production of acrylic acid, which is a process comprising the step of carrying out a catalytic gas phase oxidation reaction of acrolein with molecular oxygen or a molecular-oxygen-containing gas, thereby producing the acrylic acid;

wherein the reaction is carried out in the presence of the composite-oxide catalyst as recited in claim 1.

3. A process for production of acrylic acid, which comprises the steps of:

(1) introducing a mixed gas into a first fixed-bed multitubular reactor to thereby produce an acrolein-containing gas, wherein the mixed gas contains high-concentration-propylene and oxygen, but is substantially free from steam, and

wherein the first fixed-bed multitubular reactor is packed with a composite-oxide catalyst including molybdenum and bismuth as essential components;

(2) introducing the resultant acrolein-containing gas into a second fixed-bed multitubular reactor to thereby produce an acrylic-acid-containing gas, wherein the second fixed-bed multitubular reactor is packed with a composite-oxide catalyst including molybdenum and vanadium as essential components; and

(3) introducing the resultant acrylic-acid-containing gas into an acrylic-acid-absorbing column to thereby collect the acrylic-acid-containing gas as a high-concentration acrylic acid solution;

wherein the composite-oxide catalyst as recited in claim 1 is used as the composite-oxide catalyst which is packed into the second fixed-bed multitubular reactor; and

with the process further comprising the steps of: dividing the inside of each reaction tube of the second fixed-bed multitubular reactor in a tubular axial direction to thereby form at least two reaction zones; and then packing these reaction zones with the composite-oxide catalysts as recited in claim 1 different as to the amount of the component A in such a manner that the amount of the component A decreases from the gas-inlet side of each reaction tube toward its gas-outlet side.

4. A process for production of acrylic acid according to claim 3, wherein the mixed gas which is introduced into the first fixed-bed multitubular reactor further contains a saturated hydrocarbon which does substantially not react by oxidation in this reactor.